Amendments to Claims

1-11. Canceled.

12. (New) A protein comprising at least one amino acid, wherein said amino acid comprises a side chain that has at least one bond vector which consists of two NMR-active nuclei bonded together and wherein essentially all other nuclei in said amino acid are NMR inactive.

13. (New) A protein comprising at least one amino acid, wherein said amino acid comprises a side chain that has at least one bond vector which consists of two NMR-active nuclei bonded together, and wherein essentially all other vectors in said amino acid are NMR inactive.

14. (New) A protein of claim 12 or claim 13, wherein said two NMR-active nuclei are ^{13}C and ^{1}H, wherein the remainder of the carbon atoms in said amino acid are essentially ^{12}C, wherein the nitrogen atoms in said amino acid are essentially ^{14}N and wherein the remainder of the hydrogen atoms in said amino acid are essentially ^{2}H.

15. (New) A protein of claim 12 or claim 13, wherein said two NMR-active nuclei are ^{13}C and ^{1}H, wherein the remainder of the carbon atoms in said amino acid are essentially ^{12}C, wherein the nitrogen atoms in said amino acid are essentially ^{14}N and wherein the remainder of the hydrogen atoms in said amino acid are natural abundance.

16. (New) A protein of claim 12 or claim 13, wherein said two NMR-active nuclei are ^{15}N and ^{1}H, wherein the remainder of the nitrogen atoms in said amino acid are

essentially ^{14}N, wherein the carbon atoms in said amino acid are essentially ^{12}C and wherein the remainder of the hydrogen atoms in said amino acid are essentially ^{2}H.

17. (New) A protein of claim 12 or claim 13, wherein said two NMR-active nuclei are ^{15}N and ^{1}H, wherein the remainder of the nitrogen atoms in said amino acid are essentially ^{14}N, wherein the remainder of the carbon atoms in said amino acid are essentially ^{12}C and wherein the remainder of the hydrogen atoms in said amino acid are natural abundance.